

Abstract of the Disclosure

A method for manufacturing a flash memory comprises forming a first dielectric layer on a semiconductor substrate as a tunneling dielectric and forming a first conductive layer on the first dielectric layer. Next step is to pattern the first dielectric layer, the first conductive layer and the substrate to form a trench in the substrate. An isolation is refilled into the trench, a portion of isolation is removed to a surface of the first conductive layer. A portion of the first conductive layer is removed, thereby forming a cavity between adjacent isolation. A second conductive layer is formed along a surface of the cavity and the isolation, next, a portion of the second conductive layer is removed to a surface of the isolation. Subsequently, a second dielectric layer is formed on a surface of the floating gate, a third conductive layer is formed on the second dielectric layer as a control gate.